

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 06-168254

(43)Date of publication of application : 14.06.1994

(51)Int.Cl.

G06F 15/21
B09B 5/00

(21)Application number : 04-321018

(71)Applicant : HITACHI LTD

(22)Date of filing : 30.11.1992

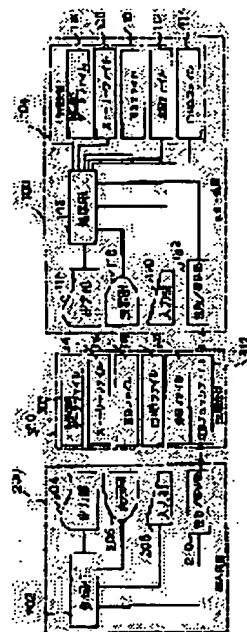
(72)Inventor : SHIBUYA SHINJI
HASHIMOTO KAZUNORI
WADA HIROKI

(54) PRODUCT DISASSEMBLY MANAGING SYSTEM

(57)Abstract:

PURPOSE: To provide the product disassembly managing system for easily recognizing the disassembly procedure of a product to be decomposed, properly disassembling the product and easily grasping the treatment of respective disassembly parts.

CONSTITUTION: This system is provided with a host device 100 for storing and presenting information concerning the disassembly of the product and a terminal equipment 200 for receiving the information concerning the disassembly from the host device extracting displaying information concerning the target product to be decomposed. The host device 100 is provided with a disassembly information storage means for storing image information expressing the parts to be worked in the case of disassembly the product for each product and information concerning the disassembly and containing information for designating the display order of display picture corresponding to the image information at least, and data output means for outputting the stored information concerning disassembly. The terminal equipment 200 is provided with a data input means for receiving the information concerning the disassembly and display means for extracting the data of the target product from the received information concerning the disassembly and successively displaying images based on information designating the order of arrangement.



LEGAL STATUS

[Date of request for examination] 24.11.1999

[Date of sending the examiner's decision of rejection] 11.06.2002

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

BEST AVAILABLE COPY

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection] 2002-12894

[Date of requesting appeal against examiner's decision of rejection] 11.07.2002

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

[JP,06-168254,A]

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] The product demolition managerial system characterized by providing the following. Host equipment which performs the informational accumulation and informational offer about demolition of a product It is the image information which has the terminal unit which receives the information about demolition from host equipment, and takes out and displays the information about a product to dissolve, and expresses the part which should work in case the above-mentioned host equipment disassembles the product concerned for every product. A demolition information storage means to accumulate the information about the demolition which includes at least the information which specifies the order of a display of the display screen by the image information Based on the information which it has a data output means for outputting the information about the demolition accumulated, and the above-mentioned terminal unit takes out the data of the target product from the information about the demolition thought to be a data input means to receive the information about demolition, and specifies the sequence to put in order, it is a display means to display the above-mentioned picture one by one.

[Claim 2] It is the product demolition managerial system which is what has the reader in which a data input means reads data to a storage by a data output means having write-in equipment which writes in data to a storage in a claim 1.

[Claim 3] It is the product demolition managerial system which are reading / write-in equipment with which the above-mentioned write-in equipment is reading / write-in equipment which can also perform reading of data in a claim 2, and the above-mentioned reader can also perform the writing of data.

[Claim 4] It is the product demolition managerial system which is what is equipped with the communication device with which a data output means and a data input means communicate through a communication line in a claim 1, respectively.

[Claim 5] It is the product demolition managerial system with which the image file which stores the image information showing the part which should work in case host equipment has storage in claims 1, 2, 3, or 4 and the product concerned is disassembled for every product to this storage, and the order specification information file of a display which stores the information which specifies the order of a display of the display screen by the image information are prepared.

[Claim 6] In a claim 3, host equipment has storage. to this storage The image file which stores the image information showing the part which should work for every product in case the product concerned is disassembled, The order specification information file of a display which stores the information which specifies the order of a display of the display screen by the image information is prepared. to a storage A part of above-mentioned image file and order specification information file [at least] of a display are stored. a terminal unit The product demolition managerial system which is what takes out image data and the order specification information of a display, and displays the information about demolition of the target product from the image file stored in the above-mentioned storage, and the order specification information file of a display.

[Claim 7] In a claim 4, host equipment has storage. to this storage The image file which stores the image information showing the part which should work for every product in case the product concerned is disassembled, The order specification information file of a display which stores the information which specifies the order of a display of the display screen by the image information is prepared. a terminal unit The product demolition managerial system which is what takes out image data and the order specification information of a display, and displays the information about demolition of the target product from the image file stored in the above-mentioned storage, and the order specification information file of a display.

[Claim 8] The product demolition managerial system which has the terminal unit which sends the information which shows the work progress about demolition to the main frame while receiving the information about demolition from the main frame which performs the informational accumulation and

informational offer about demolition of a product which are characterized by providing the following, and the main frame and taking out and displaying the information about a product to dissolve The above-mentioned main frame is the image information showing the part which should work in case the product concerned is disassembled for every product. A demolition information storage means to accumulate the information about the demolition which includes at least the information which specifies the order of a display of the display screen by the image information It is the means of communications for having the means of communications for delivering and receiving data through a communication line, and the above-mentioned terminal unit delivering and receiving data through a communication line. A display means to display the above-mentioned picture one by one based on the information which specifies the sequence which takes out the data of the target product and is put in order from the information about the received demolition, a means to acquire the information which shows progress of a demolition, and a means send the information which shows the acquired demolition progress to the main frame through means of communications.

[Claim 9] It is the product demolition managerial system which is what has the function to have host equipment further, for host equipment to have the means of communications for delivering and receiving data through a communication line, and the storage for memorizing information, to receive the information which shows demolition progress from the above-mentioned main frame in a claim 8, and to memorize this.

[Claim 10] The claims 1, 2, 3, 4, 6, or 7 characterized by providing the following Host equipment is an image file which stores the image information showing the part which should work in case it has storage and the product concerned is disassembled for every product to this storage. It is the image data for having prepared the order specification information file of a display which stores the information which specifies the order of a display of the display screen by the image information, and an image file displaying the screen in which a demolition procedure is shown for every process. Image data for displaying the screen which displays the art of the disassembled parts

[Claim 11] The claims 1, 2, 3, 4, 6, or 7 characterized by providing the following Host equipment is an image file which stores the image information showing the part which should work in case it has storage and the product concerned is disassembled for every product to this storage. It is a menu screen for having prepared the order specification information file of a display which stores the information which specifies the order of a display of the display screen by the image information, and an image file choosing the classification of two or more products. The screen for making the form input about the selected product Image data for displaying the screen in which a demolition procedure is shown for every process about the inputted product of form, and image data for displaying the screen which displays the art of the disassembled parts

[Claim 12] It is the product demolition managerial system which is what this means has the part list which should be beforehand disassembled for every demolition process of the product concerned, and has the function recorded as that by which the parts of the part list were disassembled according to the progress stage of demolition progress by a terminal unit having a means to acquire the information which shows progress of a demolition, in claims 1, 2, 3, 4, 6, or 7.

[Claim 13] The product demolition managerial system which offers the information about demolition processing of a product characterized by providing the following, and manages demolition of a product Image information showing the part which should work for every product in case the product concerned is disassembled Demolition information storage equipment which accumulates the data about the demolition which includes at least the information which specifies the order of a display of the display screen by the image information The demolition information display which takes out the data about demolition and displays the above-mentioned picture one by one about the target product based on the information which specifies the sequence to put in order

[Translation done.]

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.

2. **** shows the word which can not be translated.

3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] this invention relates to the system which manages demolition of products, such as an art of the procedure which is needed about products, such as a shipped industrial product, when performing maintenance, repair, abandonment, etc. of disassembling a product, and the disassembled member, and relates to the product demolition managerial system which accumulation of the information about demolition processing of a product is performed, and performs offer etc. especially. Furthermore, when it recycles parts, a component, etc., it is related with a suitable product demolition managerial system.

[0002]

[Description of the Prior Art] In recent years, the industrial product is constituted by various material, such as a metal besides natural materials, such as a tree and paper, plastics, ceramics, glass, and a semiconductor. When discarding such an industrial product, the mere abandonment to a disposal field and using for reclamation etc. are performed conventionally. However, there is a limitation that a place, a reclaimed ground, etc. to discard decrease, only now. On the other hand, considering a deployment of resources, there is also a view of wanting to reuse the material which can be used as much as possible. Furthermore, there are also simple abandonment and a request of wanting to lessen incineration as much as possible, from a viewpoint of environmental protection.

[0003] Then, things reusable as resources when discarding an industrial product, while collecting them and making it dissolve by the fixed demolition contractor are collected, and while disposing of what is not reusable by the optimal disposal method and decreasing the amount of waste as much as possible, after performing a cure required for environmental preservation, to be made to perform final disposal is desired.

[0004] Conventionally, the processor is collecting the industrial waste about an industrial product from a user, a collection agency, etc. And about the art, the contractor is left including the abandonment place. Therefore, using a machine, a tool, etc. which are owned, the demolition contractor depended on his experience and was dissolving by respectively proper technique.

[0005]

[Problem(s) to be Solved by the Invention] From now on, it dissolves appropriately about most industrial products, and a thing and a bird clapper with huge that it is necessary for what can be used reusing, and an unnecessary thing to perform suitable processing of harmless-izing etc., and to discard, kind of product which should be disassembled if it becomes so, and its amount will be predicted. Therefore, in order to discard about that demolition processing can be performed as efficiently as possible, that the component which should be disassembled is classified appropriately, that it can dissolve in the state where each component is not destroyed as much as possible, and a component, it is necessary to be processed appropriately etc.

[0006] However, demolition of a product cannot be left to a demolition contractor, a demolition contractor cannot respond to a variety of products appropriately in the present condition of an as, but a reusable member is discarded and it may happen to discard also about the matter to be processed special, without performing such processing. Now, it is not desirable in respect of a deployment of resources, and environmental protection. Moreover, it cannot dissolve efficiently but cost starts demolition too much, after all, a cost burden becomes this thing to a consumer, and the result and bird clapper which are not desirable are expected.

[0007] That such a thing happens has a cause in a demolition contractor not having information required for demolition. Then, offer of the information which shows a respectively suitable approach about demolition of various products is desired.

[0008] The 1st purpose of this invention is to offer a product demolition managerial system manageable so that it can provide suitably while accumulating required information so that it may prefetch and solve

the situation which will happen such from now on and the product which should be disassembled can dissolve efficiently.

[0009] Moreover, the 2nd purpose of this invention is to offer a product demolition managerial system manageable about the disassembled composition member, so that the reuse and suitable abandonment processing may be ensured.

[0010]

[Means for Solving the Problem] The host equipment which performs the informational accumulation and informational offer about demolition of a product according to one mode of this invention in order to attain the 1st purpose of the above, It has the terminal unit which receives the information about demolition from host equipment, and takes out and displays the information about a product to dissolve. the above-mentioned host equipment The image information showing the part which should work for every product in case the product concerned is disassembled, A demolition information storage means to accumulate the information about the demolition which includes at least the information which specifies the order of a display of the display screen by the image information, It has a data output means for outputting the information about the demolition accumulated. the above-mentioned terminal unit Based on the information which specifies the sequence which takes out the data of the target product and is put in order from the information about the demolition thought to be a data input means to receive the information about demolition, the product demolition managerial system characterized by having a display means to display the above-mentioned picture one by one is offered.

[0011] The above-mentioned host equipment can be considered as the composition which has storage. The image file which stores the image information which expresses with this storage the part which should work for every product in case the product concerned is disassembled, and the order specification information file of a display which stores the information which specifies the order of a display of the display screen by the image information can be prepared.

[0012] The above-mentioned data output means shall have write-in equipment which writes in data to a storage. Reading / write-in equipment which can also perform reading of data can be used for this write-in equipment. Moreover, a data input means shall have the reader which reads data to a storage. Reading / write-in equipment which can also perform the writing of data can be used for this reader.

[0013] In the case of the system which delivers and receives information using a storage, a part of above-mentioned image file and order specification information file [at least] of a display are stored in the above-mentioned storage. In this case, from the image file stored in the above-mentioned storage, and the order specification information file of a display, a terminal unit can take out image data and the order specification information of a display, and can consider them as the composition which displays the information about demolition of the target product.

[0014] Moreover, the above-mentioned data output means and a data input means shall be equipped with the communication device which communicates through a communication line, respectively.

[0015] In this case, through a communication line, from the image file stored in the above-mentioned storage, and the order specification information file of a display, a terminal unit can take out image data and the order specification information of a display, and can consider them as the composition which displays the information about demolition of the target product.

[0016] Moreover, while according to other modes of this invention receiving the information about demolition from the main frame which performs the informational accumulation and informational offer about demolition of a product, and the main frame and taking out and displaying the information about a product to dissolve It is the product demolition managerial system which has the terminal unit which sends the information which shows the work progress about demolition to the main frame. the above-mentioned main frame The image information showing the part which should work for every product in case the product concerned is disassembled, A demolition information storage means to accumulate the information about the demolition which includes at least the information which specifies the order of a display of the display screen by the image information, It has the means of communications for delivering and receiving data through a communication line. the above-mentioned terminal unit The data of the target product are taken out from the information about the demolition thought to be the means of communications for delivered and receiving data through a communication line. The product demolition managerial system characterized by having a display means to display the above-mentioned picture one by one, a means to acquire the information which shows progress of a demolition, and a means to send the information which shows the acquired demolition progress to the main frame through means of communications, based on the information which specifies the sequence to put in order is offered.

[0017] This system can be further equipped with host equipment. This host equipment has the means of communications for delivering and receiving data through a communication line, and the storage for memorizing information, shall receive the information which shows demolition progress from the

above-mentioned main frame, and shall have the function to memorize this.

[0018] In order to attain the 2nd purpose, other modes of this invention The image file which stores the image information showing the part which should work in case host equipment forms storage and the product concerned is disassembled for every product to this storage in each above-mentioned mode, The order specification information file of a display which stores the information which specifies the order of a display of the display screen by the image information is prepared. further an image file It considers as the composition using what has the image data for displaying the screen in which a demolition procedure is shown for every process, and the image data for displaying the screen which displays the art of the disassembled parts.

[0019] In this invention, host equipment is mainly placed by the maker and accumulates the data in which the procedure of the demolition based on the data as an assembler is shown when a maker side is a product development to this host equipment. On the other hand, a terminal unit is put on the contractor who dissolves, its post, etc., incorporates the data accumulated at host equipment through a storage or a communication line, and dissolves based on this data.

[0020] Moreover, as other modes of this invention, it can also consider as a voice message so that the procedure of demolition can be directed with voice. In this case, it can also consider as the composition which combines not only with voice but with the picture mentioned above, and is used.

[0021] Moreover, although this invention is applicable suitable for demolition of the product discarded, not only this but in the decomposition in maintenance check of a product, repair, etc., it can be used as a manual.

[0022]

[Function] According to this invention, the right decomposition procedures, such as a product to disassemble, are known easily. Therefore, it can dissolve efficiently. Moreover, since it can be carried out as the unit of the parts which should be disassembled was also specified, a material, parts, etc. which can be used are appropriately separable. Therefore, it can make it possible to reuse conventionally the reusable thing discarded by futility certainly. Moreover, in connection with this, although discarded, an amount can be decreased.

[0023] Moreover, according to this invention, the art of the disassembled parts is known easily. Since it dissolves correctly, the accident under demolition of a demolition person etc. can be prevented.

[0024] Furthermore, if the demolition time for every product is recorded, since a product cycle is known, it is greatly useful to future product planning. Therefore, a part of cost for demolition is absorbable as acquisition costs of the data of product planning.

[0025] In addition, as data, such as the number of the disassembled each part article, is acquired simultaneously with demolition, this data is fed back to a maker side, and unitary management can be carried out with the large capacity storage by the side of a maker.

[0026]

[Example] Hereafter, the example of this invention is explained based on a drawing. Drawing 1 is the block diagram showing the whole 1st example composition of this invention. The 1st example shown in drawing 1 has composition consists of host equipment 100 which performs the informational accumulation and informational offer about demolition of a product, and a terminal unit 200 for inputting a required matter while being put on a demolition contractor side and taking out information required for demolition, and deliver and receive data between host equipment 100 and a terminal unit 200 using a storage 300.

[0027] Host equipment 100 is usually put on the maker side of a product. This host equipment 100 functions at least for every product as demolition information storage equipment which accumulates the data about the demolition which includes at least the image information showing the part which should work in case the product concerned is disassembled, and the information which specifies putting the image information in order along with a demolition procedure. In addition, the management center which collects data and carries out package management from each maker is prepared, and you may make it install host equipment 100 there.

[0028] Moreover, a terminal unit 200 functions as demolition procedure display which has at least the function which displays the picture showing the part which should disassemble the product which should be disassembled based on the information which specifies the sequence which takes out the data about demolition and is put in order along with the procedure of demolition about the target product. Although drawing 1 shows one set of this terminal unit 200, of course, the number arranged does not restrict it to this. Probably, it will be common that two or more sets are arranged.

[0029] Host equipment 100 consists of computer systems. That is, it has the processing section 102 which performs various processings in the host equipment 100, the storage 104 which memorizes the program of the processing section 102, various data, etc., the output section 116 which outputs data by printing etc.,

the display 118 which displays data, the input section 120 for inputting data, directions, etc., and reading / write-in section 122 which perform reading/writing of data to a storage 300.

[0030] Although the processing section 102 is not illustrating, it has a central processing unit (CPU) and a primary storage, and performs functions, such as control of the whole equipment, I/O of data, reference, and an operation. All or a part of program memorized by storage and various files are loaded to a primary storage. A central processing unit performs various processings according to the loaded program. In this processing section 102, accumulation processing of data and radial transfer to a terminal unit 200 are mainly performed. Creation of each file 106-114 mentioned later shall be performed by another system by this example. Of course, you may make it create those all or parts with this host equipment 100.

[0031] The output section 116 is constituted by the printer which can output the hard copy of the picture displayed on a display 118.

[0032] The display 118 has a CRT display, its driving gear, and the image memory. The various image data sent from the processing section is displayed.

[0033] The input section 120 has some input devices [at least], such as a keyboard, a mouse, and a touch panel. Here, it has the keyboard and the mouse standardly.

[0034] Reading and reading / write-in section 122 writes the data to a record medium 300. At this example, since a flexible disk is used so that a record medium 300 may be mentioned later, this reading / write-in section 122 consist of flexible disk recording devices.

[0035] Storage 104 consists of mass storage, such as a magnetic disk unit and an optical disk unit. Although not illustrated with the product discernment data file 106, the story file 108, an image file 110, the career file 112, and the IDNo. (identification number) file 114, the image data for displays, such as a program of the processing section 102 and an edit display, etc. is stored in this storage 104. In addition, a program etc. prepares storage separately and you may make it store it in it. Moreover, this storage 104 may consist of storage arrays which arranged two or more sets of storage.

[0036] The data for discernment of products, such as the product name and form which the product discernment data file 106 is set as the object of demolition, and a serial number, are stored. More specifically, this file 106 consists of product name file 106a which stores a product name, and the form number / serial-number file 106b which stores a form number and a serial number, as shown in drawing 2. As a product name, while the name of products, such as TV, a refrigerator, and a videocassette recorder, is stored, the storing address of corresponding form number / serial number in a form number / serial-number file 106b is stored in product name file 106a about each. The form number / serial number of each product, and the start address of the story to which the story file 108 later mentioned about each corresponds are stored in a form number / serial-number file 106b.

[0037] In addition, you may make it input nominal [of the trademark given to the product concerned] as a product name. Moreover, a code can be used as a product name. In this case, what is necessary is to prepare separately the file for conversion with a product name and a code, or to combine a product name and its code with a product name file, and just to make it describe, in order for directions to be possible also by the product name.

[0038] The story files 108 are each product and form level, and in order to display in order the image data stored in the image file mentioned later in accordance with the sequence of demolition, the order (story) of a display determined beforehand is stored. That is, as this file 108 is shown in drawing 2, the story for every product and the storing address of the picture corresponding to it are stored. In this example, it has composition which describes a direct story in this story file 108. For example, if it is a refrigerator, the code of the part name which dissolves, or a part name is described like "on a door hinge" and "under a door hinge" according to the order of demolition, and the start address in which the picture corresponding to it is stored is stored.

[0039] In addition, each story is prepared as a subfile and you may make it the story file 108 store the start address of the subfile.

[0040] An image file 110 is a file which accumulates the image data for displaying each portion of the product which should be disassembled. As image data, two-dimensional image data and 3-dimensional image data are filed. There are some which are used for example, for menu screens in two-dimensional data. In addition, in this example, an animation is used as a picture which shows the procedure of demolition. However, it can also consider as the composition using a still picture. Moreover, the picture which displays the tool used for it besides being the part of a demolition product, parts, etc. can be included in image data. In addition, a tool is good also as composition which combines with the part or parts and is displayed, when it is the situation which should use it. In addition, about the detail of an image file, it mentions later further.

[0041] The career file 112 is a file which registers the content of processing while recording that this system worked. For example, as shown in drawing 3, the date on which work was done, and its content of

processing are recorded about the product discriminated by the product name, form number, and serial number which are discernment data of a product. For example, data change of the input of the image information about demolition etc., change of the demolition method, the abandonment method of a member, etc. and demolition are performed, and record of a case, record at the time of reproducing further, without dissolving, etc. are performed. A demolition part name, its number, etc. exist as record data when demolition is performed. Record of this career file 112 is recorded for example, in order of the date. In addition, you may enable it to sort for every product.

[0042] About this career file 112 being performed by the terminal unit 200 side, it is recorded with a terminal unit 200 and sent to host equipment 100 through a record medium 300.

[0043] In order that the identification number file 114 may prevent disclosure of data, the identification number registered beforehand is stored. If this identification number is not inputted, it is a file for being made not to perform reference of a file. This twists data, such as a demolition procedure, for that the data whose itself is a trade secret may be included, and for it to be made not to be exhibited especially about a new product, since the composition of a product can be known easily by that cause to be required. Therefore, that there is no input of an identification number may also enable it to refer to a file about a product without the need of making it secret.

[0044] As this identification number file 114 is shown in drawing 4, data, such as an identification number to which the reference was permitted, and a person's permitted name, the address, the telephone number, are stored, respectively about the product discriminated by the product name, form number, and serial number which are discernment data of a product. In addition, although an identification number can attach each number for every product and those who were permitted, it is good also as the same number irrespective of a product about those who were permitted.

[0045] A terminal unit 200 consists of computer systems like host equipment 100. However, it is not necessary to be the computer of an about 100 host equipment scale. For example, a small workstation, a still smaller note type computer, a palmtop type computer, etc. can be used according to the situation of a work site etc. That is, it has the processing section 202 which performs various processings in the terminal unit 200, the output section 204 which outputs the data of demolition directions etc. by printing etc., the display 206 which displays data, the input section 208 for inputting data, directions, etc., and reading / write-in section 210 which performs reading/writing of data to a storage 300.

[0046] Although the processing section 202 is not illustrating, it has a central processing unit (CPU) and a primary storage, and performs functions, such as control of the whole equipment, I/O of data, reference, and an operation. All or a part of program memorized by the storage from reading / write-in section 210 and various files are loaded to a primary storage. A central processing unit performs various processings according to the loaded program. In this processing section 202, data retrieval processing, display processing of a picture, and radial transfer to host equipment 100 are mainly performed.

[0047] The output section 204 is constituted by the printer which can output the hard copy of the picture displayed on a display 206.

[0048] The display 206 has a liquid crystal display, its driving gear, and the image memory. The various image data sent from the processing section 202 is displayed. In addition, it can use, not only liquid crystal but other display devices, for example, CRT.

[0049] The input section 208 has some input devices [at least], such as a keyboard, a mouse, and a touch panel. Here, it has the keyboard and the touch panel standardly.

[0050] Reading and reading / write-in section 210 writes the data to a record medium 300. At this example, this reading / write-in section 210 consist of flexible disk recording devices like host equipment 100.

[0051] In addition, you may make it connect a magnetic disk unit and an optical disk unit to a terminal unit 200 as external storage further. Moreover, it can also have the non-volatilized memory for memorizing the program of the central processing unit of the processing section 202.

[0052] A storage 300 is constituted from this example by the flexible magnetic disk, as mentioned above. The product discernment data file 302, the product discernment data file 106, the story file 304, an image file 306, the IDNo. (identification number) file 308, the career file 310, and the progress check file 312 are stored in this storage 300. In addition, storages 300 may be an optical disk, an IC memory, etc.

[0053] Here, the product discernment data file 302, the product discernment data file 106, the story file 304, an image file 306, the IDNo. (identification number) file 308, and the career file 310 are the things of the same composition as the corresponding file prepared in host equipment 100. However, the file of this storage 300 has less amount of data stored on relations, such as storage capacity, than the file of storage 104. Therefore, the number of products stored is restricted. For example, it is stored in the flexible disk of one sheet like one product.

[0054] The above-mentioned progress check file 312 is formed only in the storage 300. This progress check

file 312 is a file which the contents are read to the processing section 202, records the result while checking serially the progress of work of whether the demolition which shows a demolition procedure, and which should be performed for every scene was performed, and saves this. Some contents of this file 312 are transmitted to the career file 310, and it is recorded as a career. In addition, after the result is recorded on a career file, you may delete the data which record work progress of the progress check file 312. Next, the detail of an image file is explained further. An example of the image data stored in drawing 5 and 6 at an image file is shown. The picture shown in drawing 5 is an example of the image data which displays the directions receptionist screen for receiving the directions to the menu screen and system for receiving the selection while showing the service which this system is supporting. Drawing 6 shows an example of the screen displayed by the image data which shows a demolition procedure.

[0055] In drawing 5, a menu screen M1 is a screen for receiving the selection while displaying the item of the function which this system is supporting. In this example, as shown in drawing 7, each item of "demolition", "an environmental setup", a "miscellaneous function", a "contact", a "print", and "end directions" is displayed. In addition, it can add if needed. Moreover, when holding in one screen and not going out, you may make it display the selections which add the message which shows that there is the following screen, hold, and do not go out after the following screen. Moreover, an item is reduced and it may be made to display all items.

[0056] In addition, the example shown in drawing 7 shows the menu for using in a terminal unit 200. The menu for performing functions, such as an entry of data, an output, and edit, etc. is further added to the menu used with host equipment 100. These addition menus can be added also to the menu of a terminal unit 200.

[0057] Moreover, the screen of M2-M7 is prepared corresponding to each item of a menu M1. The guidance message to which it shows these menu screens so that either may be fundamentally chosen with a menu item or a certain setup may be performed is attached.

[0058] A menu M2 is a menu in which the product for demolition is shown. A menu M3 is a menu screen for performing an environmental setup of a screen setting, a loudness level of sound, printing speed, etc. According to each item, the screen for a setup is prepared further. A menu M4 is a screen for receiving the directions to this while displaying the system miscellaneous function for performing load directions of a program, a file copy, a manual function, etc. A menu M5 is a screen about the engine related to demolition, an organization, and the persons concerned which indicates a name, the address, the telephone number, etc. by list. As a contact, there are the maker of a product, a dealer, a material taking over contractor, a processor of waste, a governing legal authority, testing-machine Seki, etc. A menu M6 is a screen for performing a setup and directions of printing. A menu M7 is a screen for terminating a system.

[0059] In drawing 6, the "demolition" screen M2 displays the menu of a product. And selection of the product in which a demolition procedure should be shown is received. The guidance message which demands what a menu M2 should be chosen for with the name item which shows a demolition product name as shown in drawing 8, and the navigation key of cursor are displayed. Corresponding to these selections, the screen in which each demolition procedure is shown is prepared further (refer to drawing 6). The example shown in drawing 6 is an example in the state where the refrigerator is chosen. In this case, in a menu screen M2, the field in a screen which displays the selected refrigerator is distinguished from others, and is displayed. For example, highlighting, such as change of a color, brightness change, and blink, is performed.

[0060] Screen S11 which receives the input while performing about a refrigerator the display which requires the input of form, The title screen S12 which will indicate that it is the demolition manual of the product if form is inputted, Screen S13 in which the block which should be disassembled is shown, and Screen S14 in which the part which should work to the 1st in the block concerned, and work habits are shown, removal of the parts of the part concerned -- with Screen S15 in which a state and the content of the next work are shown the bottom Screen S16 in which the part which should work to the 2nd of this block, and work habits are shown, Screen S17 in which the state where the parts of the part demounted, and the following work content are shown, Screen S19 where the information on the quality of the material of Screen S18 in which the workplace grade and work habits of other blocks are shown, and the member currently used with the block, color, the address for delivery, etc. is displayed on a window, The list screen S20 in which the name and the list of the address for delivery of parts which should be disassembled are shown, and the end screen S21 in which the end of a demolition is shown are prepared. After demolition is completed, it returns to a menu screen M1.

[0061] In addition, although some examples are shown and it is a request, the screen is prepared about all blocks (process) of a product in fact here, respectively.

[0062] The order of a display of the screen shown in drawing 6 is determined according to the story described by said story file 108. As independent image information, a screen is stored in an image file,

respectively. Moreover, the picture of the screen in which demolition is shown is an animation for every process. For this reason, start, stop, top delivery, zoom in / zoom out, etc. can be directed, and the picture currently displayed in the pictures changes according to this.

[0063] As the form input screen S1 is shown in drawing 9, the message of "if it inputs, push a transmitting key" for the message S111, the input column S112, and the definite operation by "input form" is displayed.

[0064] Like Screen S13 in which the block which should be disassembled is shown "1 Removing a door", the message of a work content is displayed with the operation number of demolition of the block concerned. [which is shown in drawing 10] Moreover, the external view in the state where the block concerned of a refrigerator is in sight is displayed on a screen. In the external view, the 1st workplace grade in the process is displayed in distinction from other parts. In this drawing, although a slash shows in order to make illustration easy, highlighting is carried out by different brightness, different color, etc. in fact.

[0065] In addition, in the right-hand side of this screen, the area F which displays various function keys is located. "Zoom in" which performs zoom in / zoom out to the product with which this function area F is displayed on the display screen, The "information" for displaying "zoom out" and the information explained in the above-mentioned screen S19, The "rotation" for rotating the product currently displayed, "a start" which makes the display of each process start, "A stop" which stops a display, "top delivery" carried out top delivery, the "print" to which hard copy is made to output, the "contact" on which a contact list is displayed, and the "user" who can do a function suitably if needed as for a user are stationed. These can make it possible to specify each selection by the numerical keypad by making a ten key correspond. Of course, it can make it possible to choose the function to correspond, respectively, by being touching a display scope, and moving cursor with a mouse, and specifying the position with a touch panel.

[0066] When zooming in here, as the function key is chosen and it is shown in drawing 11, the range Z1 of the portion which should be expanded is specified, and the specified portion can be zoomed in if the range Z2 of the field which should expand further and should be displayed with cursor is specified with cursor. For example, if specified like drawing 11, a screen is expanded continuously, and the purpose part can be expanded and displayed as shown in drawing 12. Moreover, if cursor is put on the purpose part and the key of zoom in is pushed as other specification methods, the picture of a required size can be continuously acquired for the pushed time and zoom operation.

[0067] Moreover, the scene present-position-indication section G for performing the display which shows which stage has the work of the process in all the processes of a demolition is formed in the lower part of the screen shown in drawing 10. The position of the process is shown to this display G by the mark G1.

[0068] Screen S17 is shown in drawing 13 -- as -- "2. -- removal of the message "which next removes this door, and the parts of a demolition part -- a whole carrying-out-highlighting of part which is state the bottom and should next work external view is displayed Here, by showing the whole product and the following workplace grade, it considers so that an operator can begin to find workplace grade certainly easily. In addition, even if zoom in and zoom out are performed on the screen till then, as for the screen in which this whole is shown, a display is performed by reference condition regardless of those directions.

[0069] Screen S19 is a screen which displays the various information about the block which is displayed on the screen, and which should be disassembled, when an information key is pushed. The information on the quality of the material of the member currently used with the block, color, the address for delivery, etc. is displayed on a window. If it considers as information, notes, like the dimension of parts, a weight, an art, the address for delivery, a reference, and there are a note of generating poisonous gas, if it burns, and printing and insertion parts are described. These display preferentially the information on the method of displaying altogether collectively part, and the display mode of responding for asking and displaying is possible for other information. Here, if the printout of the data of the address for delivery is carried out, the office work of delivery can be simplified by pasting ***** to the load which should deliver it.

[0070] The detailed example of a display of the list screen S20 in which the name and the list of the address for delivery of parts which should be disassembled are shown is shown in drawing 15. Moreover, an example of the end screen S21 in which the end of a demolition is shown is shown in drawing 16. Although only an area is displayed, you may make it the address and a destination name further shown in a detail in the example of drawing 15 in the list of the address for delivery. At drawing 16, the position of the process is shown to the last of the scene present-position-indication section G by the mark G1. Therefore, it turns out also from the position of this mark G1 that demolition was completed.

[0071] As shown in drawing 12, signs which indicate the demolition sequence about the part to be the guidance sentence which shows what should be performed on the screen concerned, and the figure which shows the object part of the target product, such as a number, are expressed as the screen in which a demolition part and work habits are shown.

[0072] Moreover, although drawing 6 does not show, the screen in which a tool required for demolition of the product is shown can be prepared for every product. The example is shown in drawing 17. The figure of a tool and its name are shown by drawing 17. In addition, in addition to this according to object parts, the size of an anchoring bolt etc., etc., you may add the information which shows the size of a tool.

[0073] An example of the above-mentioned terminal unit is shown in drawing 18. The terminal unit 200 shown in drawing 2 was held in the case 220 of the size which can be held single hand, has a sensible-heat printer as the output section 204, and has a liquid crystal display device as a display 206, and has a keyboard as the input section 208.

[0074] Next, operation of this example is explained with reference to the flow chart shown in drawing 19. First, required demolition information is accumulated in host equipment 100. as for this, the maker of a product creates the data about demolition of the demolition procedure based on the data as the design of a product, simultaneously the assembler of a product etc. Data are created as data which should be stored in the product discernment data file 106, the story file 108, and an image file 110, respectively as mentioned above. At this time, career information and an identification number can be added further.

[0075] The data about demolition of these products are dedicated to a flexible disk, and are inputted into host equipment 100 from reading / write-in section 122 of host equipment 100. In addition, although not shown, means of communications is prepared and you may make it input data through this means of communications in this example. The data inputted into host equipment 100 are inputted into each file to which the above-mentioned storage 104 corresponds by control of the processing section 102. At this time, as shown in drawing 2, registration of required product discernment data, registration to the story file 108 of the story about the product, and registration to the image file 110 of image data are performed to the product name file of the product discernment data file 106, and a form number / serial-number file. Moreover, it is carried out by combining the registration to the career file 112. Furthermore, when the identification number is set up, registration to an identification number file is also performed.

[0076] Next, by the terminal unit 200 side, if demolition information is needed, the demolition information about the product will be acquired from host equipment 100 through a storage 300. Of course, at this example, although not equipped, you may transmit data on-line by having means of communications.

[0077] Next, a power supply is turned on and started about a terminal unit 200. Here, the processing section 202 investigates whether reading / write-in section 210 is equipped with the terminal unit 200 and the storage 300 (Step 1001). And if reading / write-in section 210 is equipped with a storage 300, the processing section 202 will display on a display 206 the message which requires the input of an identification number, and will wait for the input (Step 1002). An input of an identification number collates the number with the identification number in which it is stored by the identification number file of a storage 300 (Step 1003). As a result of collating, if both are in agreement, protection will be canceled (Steps 1004 and 1006). On the other hand, if both are not in agreement, the processing section 202 displays the message which directs reinput of an identification number to a display 206 (Step 1005). In addition, even if it repeats the number of times and the reinput which were defined beforehand, when collating of ID is inharmonious, you may be made to display an error on a display.

[0078] If the processing section 202 will incorporate the data of a menu screen from an image file 306, the menu display first shown in a display 206 at drawing 7 will be performed, if protection is canceled, and there is selection of an item, the menu applicable to the item will be displayed further. Here, the input section's 208 selection of "demolition" displays the menu of drawing 8. And one of product groups will be chosen here. Here, the refrigerator should be chosen (Step 1007).

[0079] The processing section 202 reads the progress check file 312 beforehand, and functions as progress data generation section 202a. That is, the existence of the directions in the terminal unit 200 in the checkpoint set up beforehand is supervised. At this time, it records that selection of a product was performed by the menu screen M2. In addition, the check of the same progress is performed also at each next step. That is, about each of Steps 1008, 1009, 1010, 1012, 1013, and 1014, progress is checked and progress check data are created. This data is stored in the career file 310.

[0080] As shown in drawing 9, the processing section 202 displays on a display 209 the message "input form", and waits for the input from the input section 208 (Step 1009). Here, if form is inputted at least, the data about the form will be read from the product discernment data file 302 (Step 1010). In addition, a product is individually manageable if the input of a serial number is made. Therefore, it becomes possible to be able to take the actual life data of a product and to get to know a kink peculiar to a product etc.

[0081] Next, the processing section 202 asks for the story file corresponding to it from a form number / serial-number file 106b, and reads a story from the applicable storing part of a story file (Step 1011). Furthermore, using the address described by the story file 108, the screen corresponding to the story is read from an image file 110, and is displayed on a display 206 (Step 1012). As the display of the screen in

this state is described by the story stored for example, in a story file and is shown in drawing 6, it is displayed one by one (Step 1013). In this stage, various functions which were mentioned above are realizable by specifying a function key. Namely, the information of each part article (a dimension, a color NO. quality-of-the-material name, weight, an art (address for delivery), an acquisition place (inquiry maker point), note (if it burns, notes (those with printing, those with insertion parts, etc.) can check harmful-gas generating etc. on a screen, when required.))

[0082] Transmission Key is pushed whenever the process of one demolition finishes. The picture of explanation of the process of the next demolition is displayed on a screen. By repeating this, the process of demolition can be displayed one by one.

[0083] And finally the screen of the purport which the demolition processing about the product ended is displayed, and selection of whether to disassemble other products is asked (Step 1014). It ends, if other products are disassembled and it will not dissolve by returning to Step 1007.

[0084] In addition, whenever it pushes Transmission Key, the program which counts demolition / parts which were disassembled can be beforehand loaded to the processing section 202. If it has such a program, number management of the parts disassembled from the product can be performed.

[0085] Next, the 2nd example of this invention is explained with reference to a drawing. The product demolition managerial system of the 2nd example of this invention shown in drawing 20 consists of host equipment 100 and a terminal unit 200 like the 1st example. Here, the point that host equipment 100 and a terminal unit 200 have the progress check file 124 further in the point connected by communication and the file stored in storage 104 has a difference, and it is almost the same as that of the 1st example about other composition. Then, difference is explained as a center here.

[0086] The point of having the communications department 126 to host equipment 100, and having the communications department 212 to it at a terminal unit 200 is the difference with the 1st example. In addition, this example is good also as composition which prepares reading / write-in section and can use a storage 300 together.

[0087] A flow of operation is shown in drawing 21. In the flow of operation in drawing 21, it is big difference with the 1st example in this example that a terminal unit displays by accessing the file of host equipment and taking out the data of a required file. Moreover, it is also differences that there is no step which checks the existence of wearing of a storage, and to collate an identification number with the identification number of the identification number file of host equipment 100. About other operation, it is common in the 1st example.

[0088] Next, the 3rd example of this invention is explained with reference to a drawing. this example consists of combination of host equipment 100 and a terminal system, as shown in drawing 22. A terminal system has the main part 400 of a terminal, and the terminal unit 200 connected to this main part 400 two or more generation. this example gives various files to the main part 400 by the side of a terminal, and has the composition that the terminal unit 200 further connected to a low rank uses this. That is, in this example, the main part 400 of a terminal functions as the host equipment 100 of the 2nd above-mentioned example similarly. Merely differing is the point that the host equipment 100 further for management is connected to this. Therefore, substantially, you may consider the main part 400 of a terminal of this example to be host equipment of the 2nd example of the above.

[0089] Host equipment 100 has the processing section 102, storage 104, the output section 116, a display 118, the input section 120, and the communications department 126. Fundamental composition is the same as the thing of the 2nd example. However, difference is to form the career file 112 and the progress check file 124 in storage 104, and not prepare other files in it. In addition, in fundamental structure, there are no host equipment and difference of the 2nd example.

[0090] A terminal unit 200 has the processing section 202, the output section 204, a display 206, the input section 208, and the communications department 212, and is the same composition as the terminal unit of the 2nd example. Therefore, since the explanation about this overlaps, it is omitted.

[0091] The main part 400 of a terminal has the processing section 402 which functions as host equipment 100 similarly, storage 404, the output section 416, a display 418, the input section 420, and the communications department 426. In storage 404, it is the same as that of the file prepared in the storage 104 of the host equipment 100 of the 2nd example. Here, the explanation about each file is omitted in order to avoid duplication.

[0092] Next, operation of this example is explained. this example performs creation of the image data which should be displayed, incorporation, etc. with host equipment 100, and stores data in the image file 410 grade of the main part 400 of a terminal. Fundamentally, operation in a terminal unit 200 is the same as the case of the 2nd example. However, in this example, the points which have composition of canceling protection for every product differ. That is, if it chooses dissolving further about other products at Step 1014 of drawing 23, although it returns to Step 1007, it is necessary to return to Step 1002 and to input

an identification number again in this example, in the 1st and 2nd examples.

[0093] The list of the screen in the case of performing the demolition by this example to drawing 24 is shown. Difference has a difference in a point with the screen which inputs an identification number into that there is a screen which displays a tool, and the last.

[0094] this invention besides each above-mentioned example can also be constituted as follows. Dissolving is also considered taking out headphone and an earphone from the main part attached to the waist at the especially big time of a product besides the transfer about demolition of the demolition procedure by the above-mentioned picture etc., and hearing a demolition procedure with voice.

[0095] The number management of the parts automatically disassembled by the control program built in the portable I/O machine and the data for every each part article are managed. The data of such each part articles etc. is memorized by the storage 300 containing the data about demolition of a demolition procedure etc., or another storage 300, and is returned to a maker side. Moreover, data can also be sent using a communication line etc.

[0096] The data sent from the disassembled side is memorized by the large capacity storage 104 by the side of a maker, and unitary management is carried out.

[0097] Number management of the parts disassembled automatically and the data for every each part article are managed by the maker side with the control program built in the portable I/O machine. For example, the total amount of material can be grasped with weight. Moreover, since a form number is put in, shipment Japan / demolition Japan of the product are calculated, management of a life etc. can be performed, and it is greatly helpful also to product planning of the next kind. Since the life for every parts can also be checked, a use is also still changeable by what was used for a long time, the new thing, etc.

[0098] The above-mentioned example mainly shows the example of the demolition in the case of discarding a product. However, when disassembling a product, there is demolition for demolition of performing [*****] the demolition not only for abandonment but maintenance check, for example, taking apart and cleaning, and repair etc. It is desirable that it can dissolve in a suitable procedure also by these cases. this invention is appropriately [in these cases] applicable. In this case, also about a reassembly, if it can express as the technique of the above-mentioned example, it is more desirable. Moreover, in taking apart and cleaning etc., washing of parts etc. may be performed. About processing of the parts in this invention, the art for not the processing for abandonment but washing, rust prevention, etc. should just be offered as an information. Moreover, about a parts replacement, if there is information, such as the acquisition place, it is convenient. Moreover, when there are no parts for exchange, the information on a substitute is added. this invention is applicable also to service of such maintenance check, repair, etc.

[0099]

[Effect of the Invention] Although it dissolves according to this invention as explained above, the right decomposition procedure is known easily. The art of the disassembled parts is known easily. Since it is the right demolition procedure, it does not become the futility of time but time can be used effectively.

[0100] In addition, although it is a subordinate effect, management of the parts with which the maker side was disassembled can be performed. Moreover, since it dissolves correctly, a demolition person's accident can be prevented. Furthermore, since a product cycle is known, it is greatly useful to future product planning.

[Translation done.]

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.

2. **** shows the word which can not be translated.

3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram showing the composition of the 1st example of the product demolition managerial system of this invention.

[Drawing 2] Explanatory drawing showing those relations while the structure of the product discernment data file used in each example of this invention, a story file, and an image file is shown typically.

[Drawing 3] Explanatory drawing showing typically the structure of the career file used in each example of this invention.

[Drawing 4] Explanatory drawing showing typically the structure of ID file used in each example of this invention.

[Drawing 5] Explanatory drawing showing an example of the menu screen of the 1st example of this invention.

[Drawing 6] Explanatory drawing showing an example of the screen in which demolition down stream processing of the 1st example of this invention is shown.

[Drawing 7] Explanatory drawing showing an example of the menu screen of the function which the system of the 1st example of this invention supports.

[Drawing 8] Explanatory drawing showing an example of the menu screen of demolition processing of the 1st example of this invention.

[Drawing 9] Explanatory drawing showing an example of the screen for the form input in demolition processing of the 1st example of this invention.

[Drawing 10] Explanatory drawing showing an example of the initial screen of the 1st process in demolition processing of the 1st example of this invention.

[Drawing 11] Explanatory drawing showing the zoom function in which it can use in each example of this invention.

[Drawing 12] Explanatory drawing showing an example of the screen in which the zoom function in which it can use in each example of this invention is performed, and the part for demolition is expanded and shown.

[Drawing 13] Explanatory drawing showing an example of the initial screen of the 2nd process in demolition processing of the 1st example of this invention.

[Drawing 14] Explanatory drawing showing an example of an information function which can be used in each example of this invention.

[Drawing 15] Explanatory drawing showing an example of the table showing the list and the address for delivery of the parts which can be used in each example of this invention, and which should be disassembled.

[Drawing 16] Explanatory drawing showing an example of the end screen which can be used in each example of this invention.

[Drawing 17] Explanatory drawing showing an example of the screen which displays the tool which can be used in each example of this invention.

[Drawing 18] The perspective diagram showing an example of the gestalt of a terminal unit applicable in each example of this invention.

[Drawing 19] The flow chart which shows operation of the terminal unit of the 1st example of this invention.

[Drawing 20] The block diagram showing the composition of the 2nd example of the product demolition managerial system of this invention.

[Drawing 21] The flow chart which shows operation of the terminal unit of the 2nd example of this invention.

[Drawing 22] The block diagram showing the composition of the 3rd example of the product demolition managerial system of this invention.

[Drawing 23] The flow chart which shows operation of the terminal unit of the 3rd example of this

invention.

[Drawing 24] Explanatory drawing showing an example of the screen in which demolition down stream processing of the 3rd example of this invention is shown.

[Description of Notations]

100 [-- Storage, 106 / -- Product discernment data file,] -- Host equipment, 102 -- The processing section, 104 108 [-- Career file,] -- A story file, 110 -- An image file, 112 114 [-- A display, 120 / -- Input section,] -- An identification number file, 116 -- The output section, 118 122 [-- Communications department,] -- Reading / write-in section, 124 -- A progress check file, 126 200 [-- The output section, 206 / -- Display,] -- A terminal unit, 202 -- The processing section, 204 208 [-- The communications department, 300 / -- Storage,] -- The input section, 210 -- Reading / write-in section, 212 302 [-- An image file, 308 / -- An identification number file, 310 / -- A career file, 312 / -- A progress check file, 400 / -- Main part of a terminal.] -- A product discernment data file, 304 -- A story file, 306

[Translation done.]

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.